11. May. 70

Hon. James Pollock

Director of the U.S. Mint.

Dear Sir,

I have examined with some care the Description & Drawings of Mr. John Feix for an improved method of Granulating Gold & Silver for the purpose of Refining them by acid, and herewith give my opinion on the method.

It looks as tho' it might succeed in giving extended surface to the granulated metal, for I tried in 1852 to obtain an improved result, by pouring the melted metal through the bottom of a crucible, perforated with small holes, but the improvement was too slight to warrant its adoption. Mr. Feix's improvement consists in rotating the perforated crucible, & also, it would appear from the Drawings, in directing a multitude of streams against the descending metal, altho' there is

no description of this last operation. It looks as if it might be made to succeed, even if it should not at the first trial.

I must however draw your attention to the fact, that we made some experiments on Granulating Gold & Silver with a revolving Apparatus of Messrs. R.A. & B.C. Silghman, a number of years since, & that it was so perfect in its action that we dared not employ it; for the gold & silver were made so excessively fine, some of them like dust, that we could not procure their settlement in the water, much of it floating like the finest saw dust. We did not therefore daire to adopt such a hazardous method.

On the whole, I would suggest that permission be obtained to try the experiment with Mr Feix's arrangement, at the Br. Mint, San Francisco, worked under his supervision, but of course, at the same time, under the watchful eye of one (an officer of the Mint) not interested in the process. When it proves on trial to give better results than the present process, & without danger of loss, we shall be ready to try it here.

Very truly yours
J.C. Booth

11. May 1870

Letter on Fein's Granulations